Policies and Guidelines

CICE Consortium

The Consortium's governance structure is designed to boost efficiency while still providing oversight and a decision-making process. Generally speaking, decision authority resides with team members doing the work, with more communication, coordination and governance required for decision-making as cross-team impact increases. Only Consortium Members' representatives have decision-making authority at any level within the Consortium.

Organization

Figure 1 of the Governance document contains the Organizational (Org) Chart proposed for the Consortium structure, showing the Executive Oversight Board in tan, the Executive in blue, and the six Teams with Team Leads in green. The committee of Team Leads includes Lead and Co-lead Coordinators and the Software Engineer.

New code contributions must have already undergone testing, but coordination with other Teams should already also have occurred during the development process, often initially coordinated through the community liaison.

Consortium Membership

It is necessary to distinguish between sea ice model developers and Consortium Members in order to define and limit decision-making authority and responsibilities. Care should be taken to emphasize that the purpose of the Consortium is to enhance sea ice model development through community collaboration with few time-consuming demands on code users.

The FTE level needed to complete Consortium work likely will change over time, once the organization and processes are set up and running. An explicit minimum FTE level is not defined for determining Consortium Membership, initially, but this may change at the discretion of the Sponsors.

If a Consortium Member's representative for a critical role must change, then the Consortium Member should give more than two weeks notice and recommend (via their EOB member) another person for the vacancy. If a Consortium Member can no longer participate at all, the Lead Coordinator shall convene the Team Leads committee to discuss and decide how to cover the gaps, in consultation with the EOB. If a Member leaves the Consortium, its code cannot be removed from the Consortium repository.

Intellectual property protection

The distribution policy is intended to protect individual authorship and intellectual property rights for both Consortium Members and the broader CICE user community, while encouraging open, collaborative software development. It is available here.

Settling disputes

If a dispute cannot be settled at the Task Team level, then the committee of Team Leads will handle discussion of the issue, with input from Lead Coordinator. The Lead Coordinator has the authority to make binding decisions, but may take particularly difficult issues to the EOB for its advice and assistance.

Code contribution responsibilities

Software contributors (both non-Consortium community members and Consortium Members) will be responsible for running the standard test suite and analysis package as the first step of the code acceptance process. New code must be accompanied by associated documentation describing the change and its effect, i.e. both testing and analysis results. Software guidelines for code development, maintenance and management are found here.

Process for institutional acceptance of new code contributions

Individual Consortium Members are not required to test, ratify or otherwise accept new code contributions before those contributions are made available to the public. Instead, a confidence score is maintained for each version that indicates the level of successful testing that has occurred collectively. A minimum confidence score is required for code changes to pass into the public branches of the repositories.

Code Management

The Consortium will concentrate on the sea ice model code itself (initially CICE), including the physics modules, infrastructure, testing and analysis software, and related capabilities such as coupling interfaces and data assimilation code. The Consortium's work does not include tuning and validation of the model in other model settings such as coupled climate and operational configurations.

The Consortium will provide a basic, common test suite and analysis package for evaluating changes to the model. Test cases will verify that a change does not break the code, while analysis tools quantify simulation improvement or degradation in the context of the stand-alone configuration. Regression tests should be completely automated and easy to execute.

Analysis tools, publications and other validation information from the modeling centers will be deposited in the repository.

Some parts of the current code are unique to individual Consortium Members, such as coupled model interfaces (drivers, coupling fields), and analysis packages. The interfaces can be included in the repository to simplify the incorporation of necessary changes originating in other parts of the CICE code. Task Teams are responsible for making changes in all interfaces (including Icepack) related to their model changes, with oversight from the Software Engineer. Each Consortium Member is responsible for testing its own interfaces, packages, and configurations. Software packages that are very Member-specific may not be maintained by Consortium, e.g. if they are useful only for a single Member.

Review and Amendment

This document will be reviewed two years from its effective date, and renewed or replaced to ensure that the policies and guidelines of the Consortium remain relevant and support its goals and purposes. Amendments to this document may be made with the approval of the Executive Oversight Board.

Document history

8 May 2017: Initial draft (parsed from the original draft Governance and Terms of Reference document with additional input from the EOB)
1 July 2017: Removed link and dated for public posting